

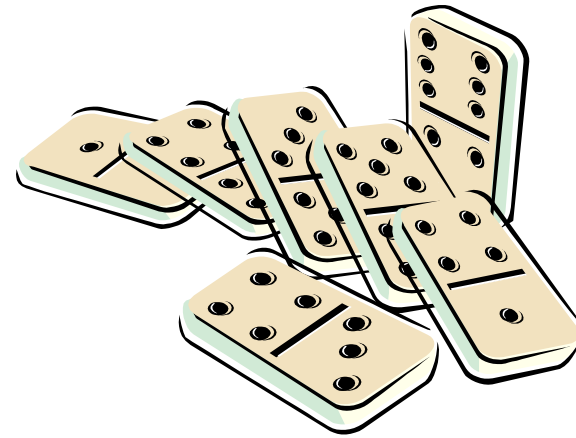
Competition in California's Petroleum Industry October 12 2004

Gregg Haggquist

In affiliation with
Drew Laughlin

OVERVIEW & INTENT

- How Players Shape the Market
- Roles, Strategies & Consequences
- Consumers at the tip of the spear.



Views from Various Vantage Points

- EIA Assessments
- What the blenders see
- Offshore suppliers wait for signals
- WSPA says “The market works.”
- Terminal operators see congestion
- Consumer pays at the pump

Points to Ponder

(Re-examine in light of last 6 months)

- 1.) MARKET PARTICIPANTS
- 2.) CONTROL OF MAJORS
- 3.) CARGO & PIPELINE TRADERS
- 4.) MAJOR OIL COMPANY TRADERS
- 5.) INDEPENDENT P/L & CARGO TRADERS
- 6.) PRICE FORMATION & PIPELINE SCHEDULES
- 7.) LEVERAGING
- 8.) RETAIL STICKINESS
- 9.) MARINE STORAGE
- 10.) DOWNSTREAM TERMINAL SPACE
- 11.) FOREIGN SUPPLY
- 12.) FORWARD MARKET LIQUIDITY

Flow Dynamics & Price

- Infrastructure
- Flow
- Arbitrage
- Backwardation
- Blockage & Access



Marine Storage

- Don't build it and they will come
- The gateway to the islands
- CARBOB only
- Tanks as unsightly blemishes to the environment

Downstream Terminal Space

- Keep it moving!
- Inventory as a hot potato (price backwardation)
- MLP Structure: Don't build until absolutely necessary.
- Investors have lined up but are now blocked by NIMBY interests

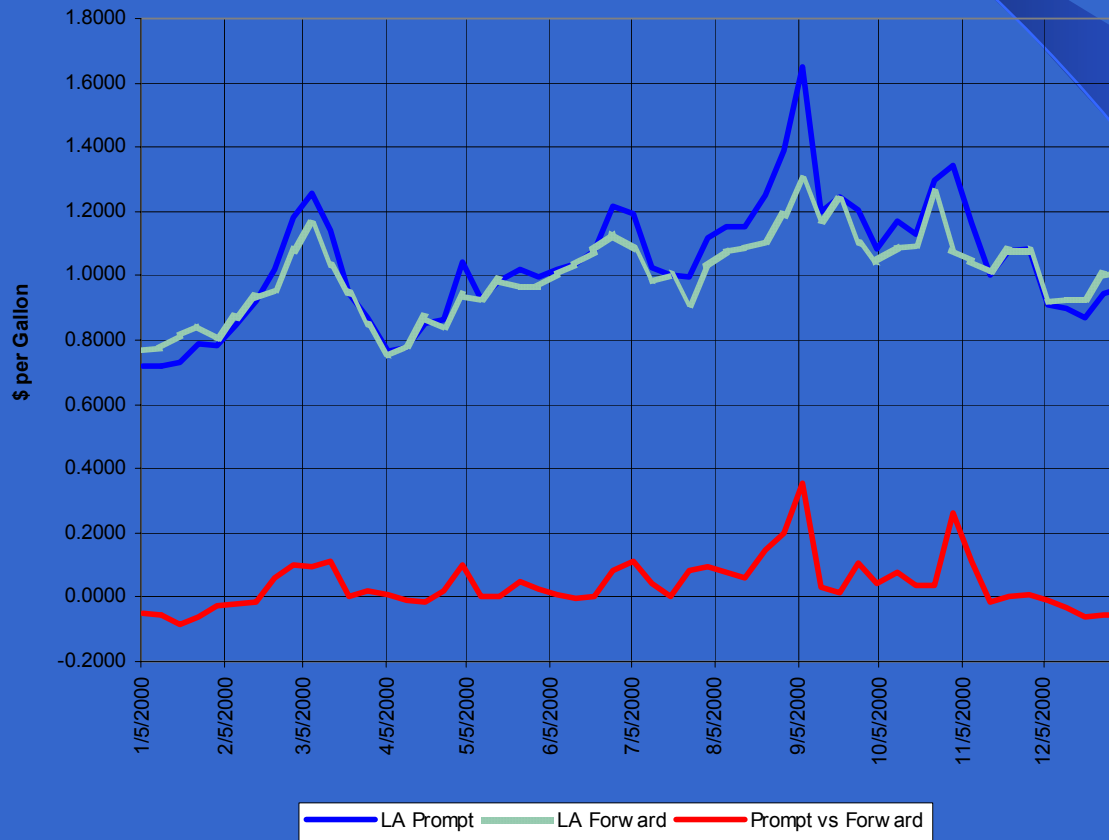


Foreign Supply

- Singapore (Not USWC Spec)
- Japan (conventional only)
- Korea (alkylate, reformat, near BOB)
- China (Conventional EPA)
- Australia (Integrated with Majors)
- Europe (Can meet CARBOB but expensive)
- S. America (Not USWC Spec)
- Canada (Can meet CARBOB but expensive)

Forward Market Liquidity

Los Angeles Spot Unleaded
Prompt and Forward - 2000

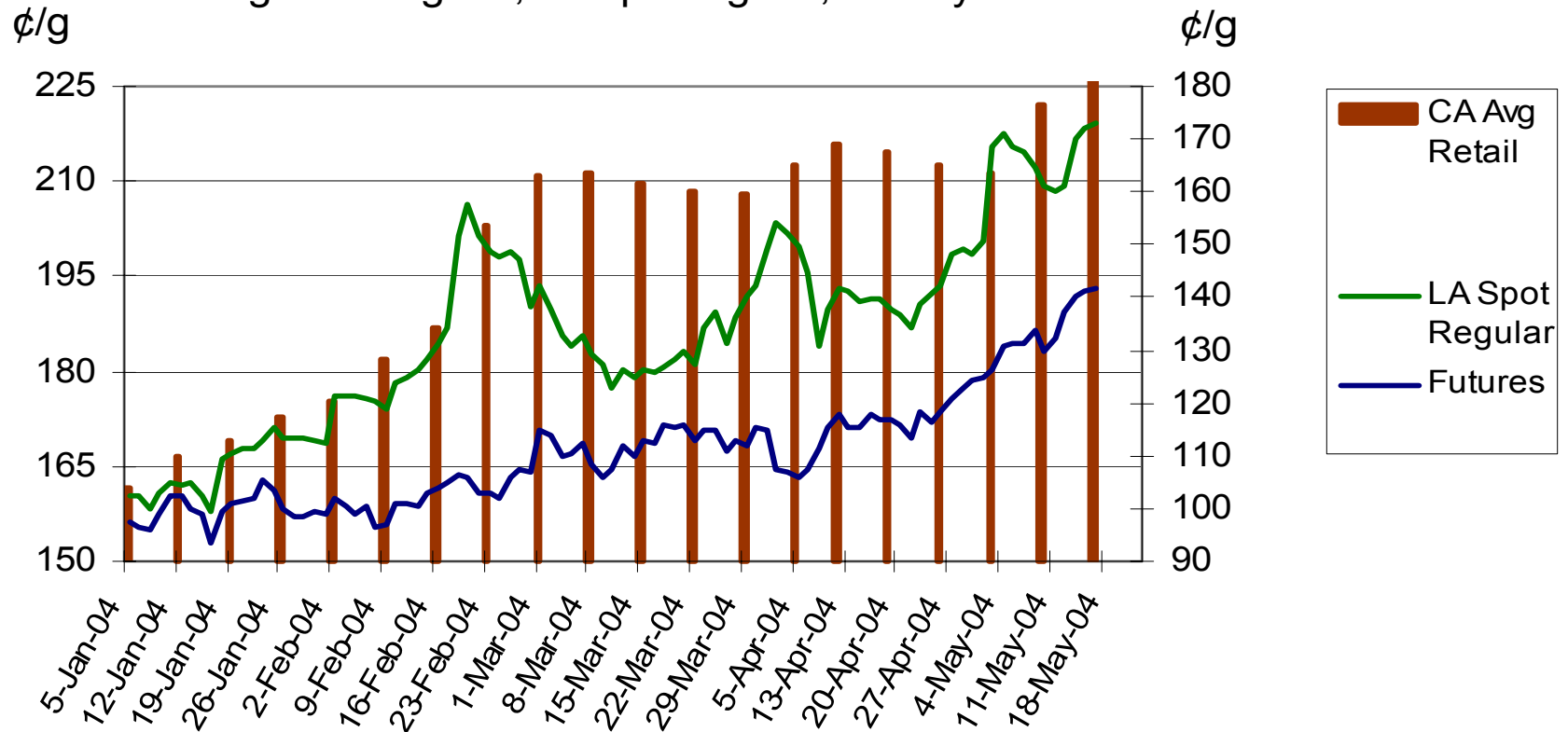


MGE Co. Ltd.: Gregg Haggquist

Spot to Retail

2004 Gasoline Prices

CA avg retail regular, LA spot regular, and Nymex futures



Blending Considerations

- Alkylate & Blendstocks Situation
- Chemicals - Octanes - Imports
- Shipping - Security – Sulfur



Changes in 2004/2005

- MTBE ban in NY and Connecticut
- New national reductions in gasoline sulfur
- Strong U.S. and world Chemical demand
- Recovering U.S. and world economy
- Exports of chemicals and gasoline components
- High natural gas prices
- Far East (China-India) Demand accelerates

Potential Octane Shortage

- Some desulfurization can lower octane and volume of gasoline components.
- Lower octane pools generally lower gasoline blendstock availability.
- Very tight supplies of high octane components in the U.S. are due to exports to the Far East and desulfurization in the U.S.

Shipping

- New supply sources have redefined distribution of gasoline and components
- Europe has had numerous tanker spills in the last few years
- European refiners are currently requiring quality ships for most of its ports.
- Freight rates have doubled

Security

- Ship owners must designate security officers. Conduct drills and submit plans to the US Coast Guards.
- The penalty for those ships which do not comply with the regulations, will result in ships being barred from the U.S. ports
- Ships must carry proper certifications from their flagged country.
- Delays at discharge ports adds upward price pressure in tight markets

Tanker Rates

- Tanker rates are at historic highs.
- Additional supplies of OPEC crude require additional ships to move the crude and additional ships to move the finished product.
Freight rates have doubled.
- Demand in China continues to drive up rates
- Increased demand in Brazil, India and additional Pacific Rim add to upward pressure

Cost of the Last Barrel

- Blending Economics
- Sulfur Constraints & Consequences
- Refining -
Technology &
Global Supply

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Alkylate



\$\$\$\$\$\$\$\$

\$\$\$\$\$\$\$\$

Reformate

\$\$\$\$\$\$\$\$\$\$

Impacts on California

- Looking Back & Seeing Forward
- Infrastructure – Market Power & Price Formation
- Scheduling & Short Squeeze
- Ship, Pipe and Street



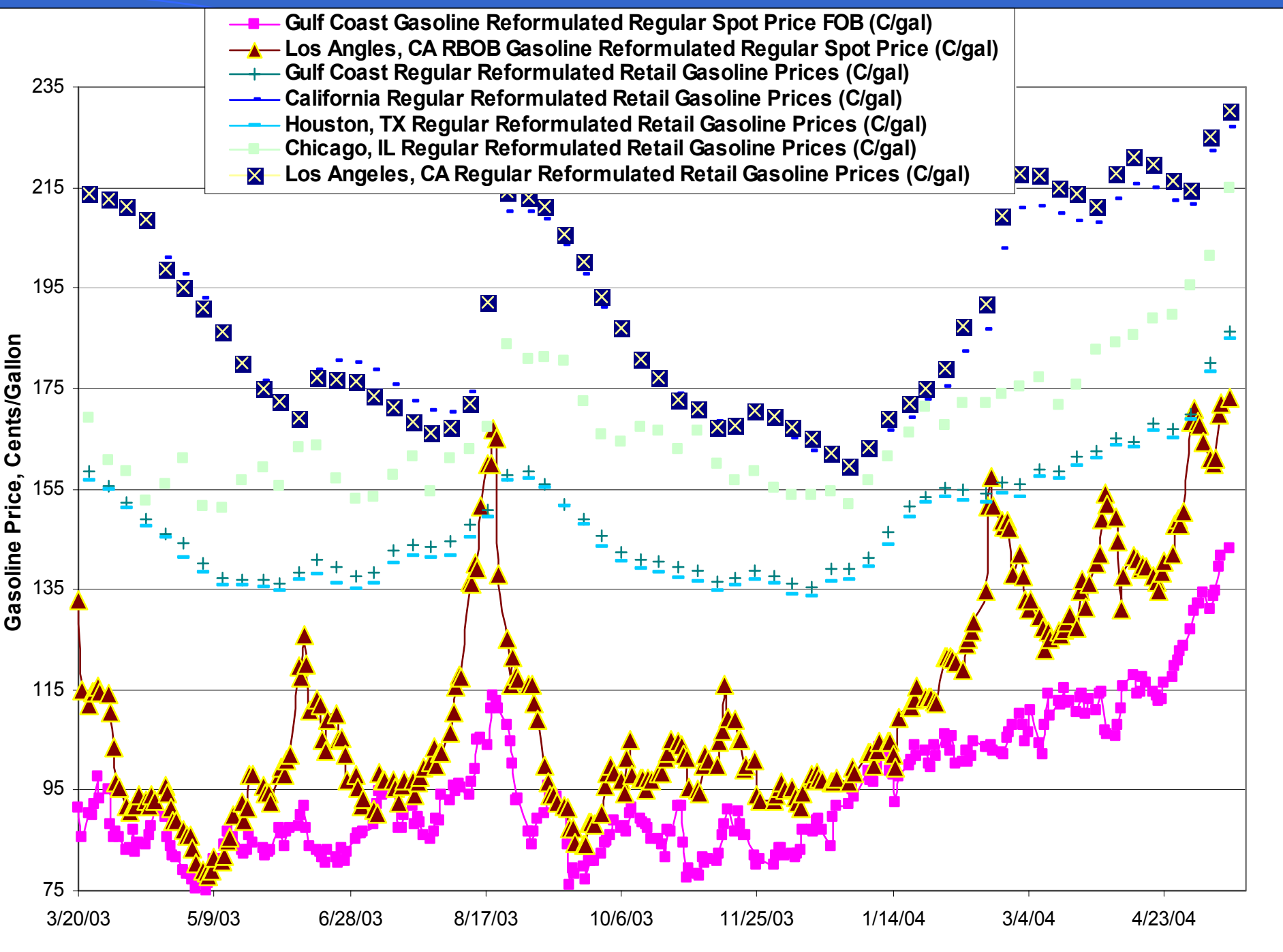
California vs. Other U.S. Markets

- More volatility
- Higher prices
- Less competition
- Less liquidity
- More resistance to change

CALIFORNIA

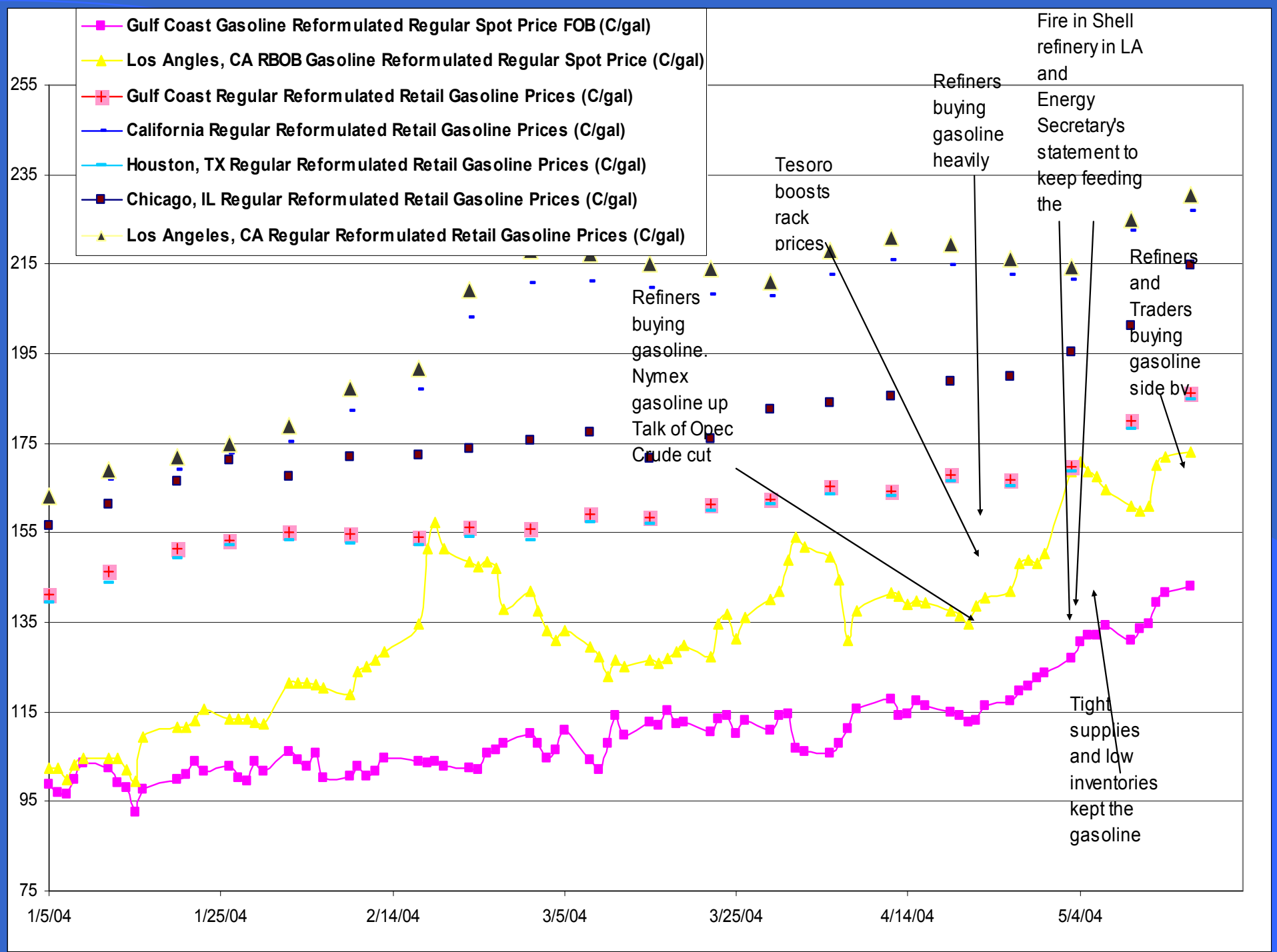
How Much of an Island?

- Three weeks and more by sea
- Isolated by specification
- Constrained by infrastructure
- Paralyzed by politics
- What does it cost?



What was Predicted in February?

- More volatility
 - More expensive imports
 - Higher prices relative to back East
 - More scheduling difficulties
-
- And what happened since?



Gasoline Prices Feb 01-May 03, 2004

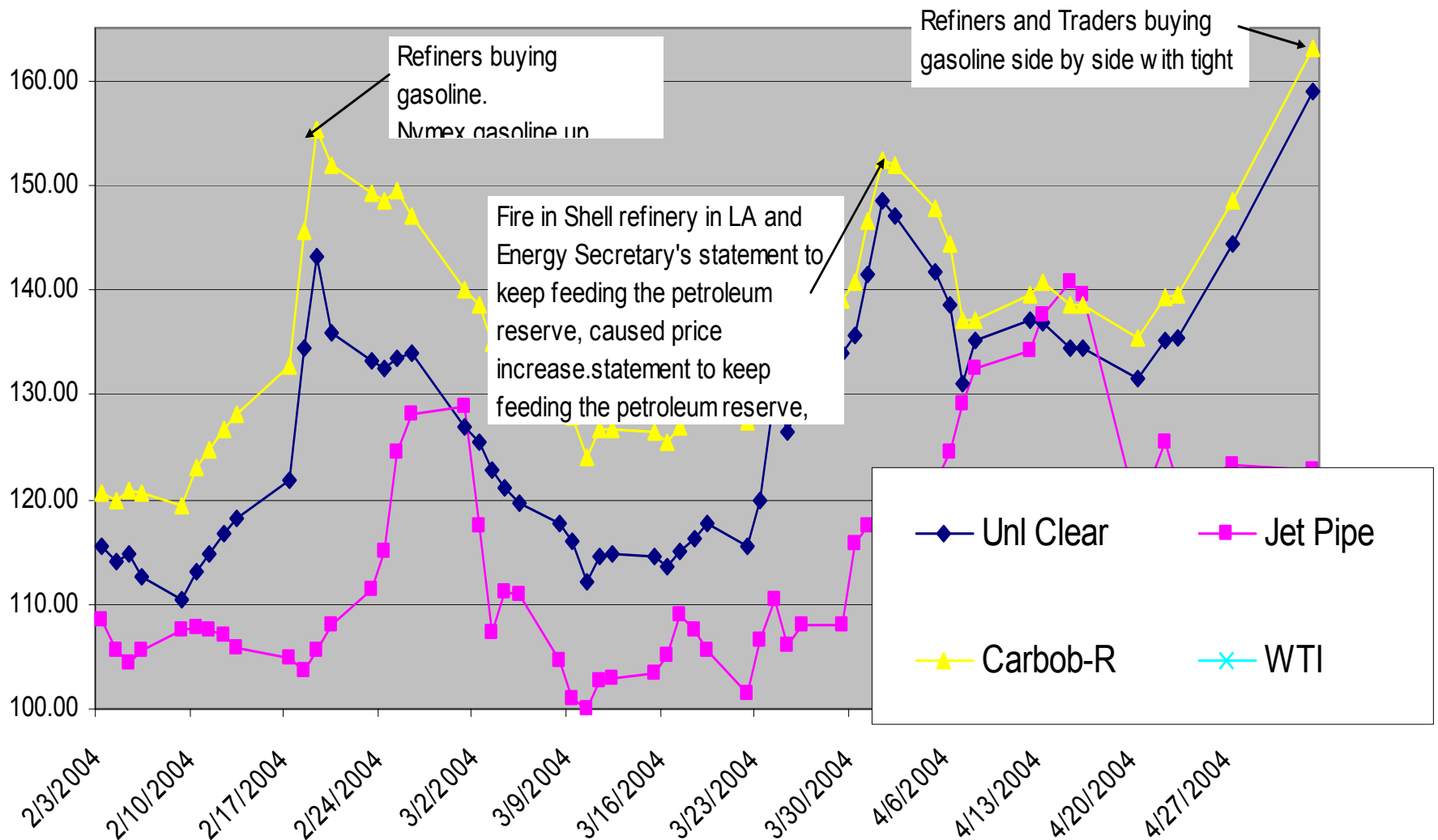


Chart June 2004

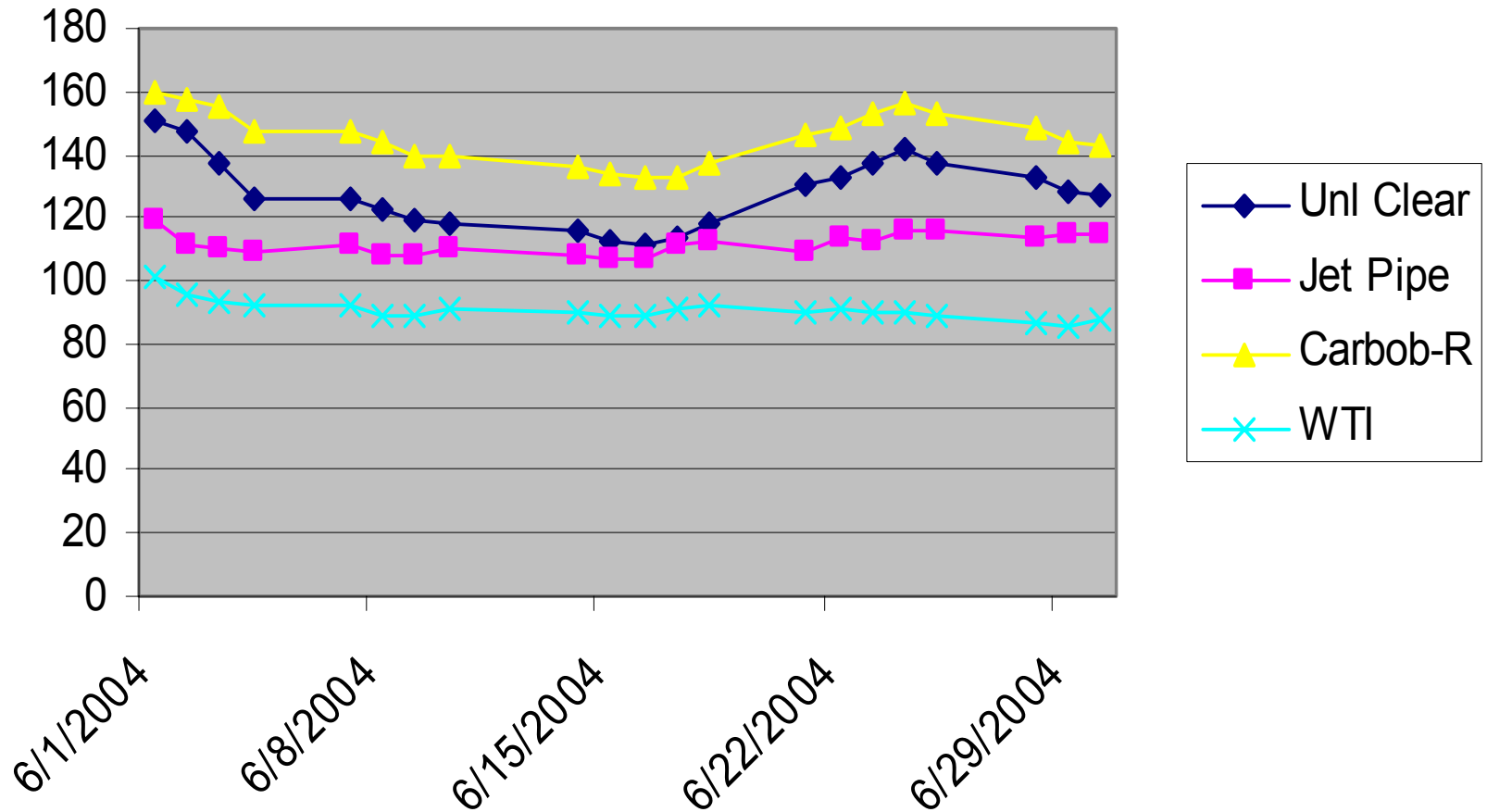


Chart September 2004

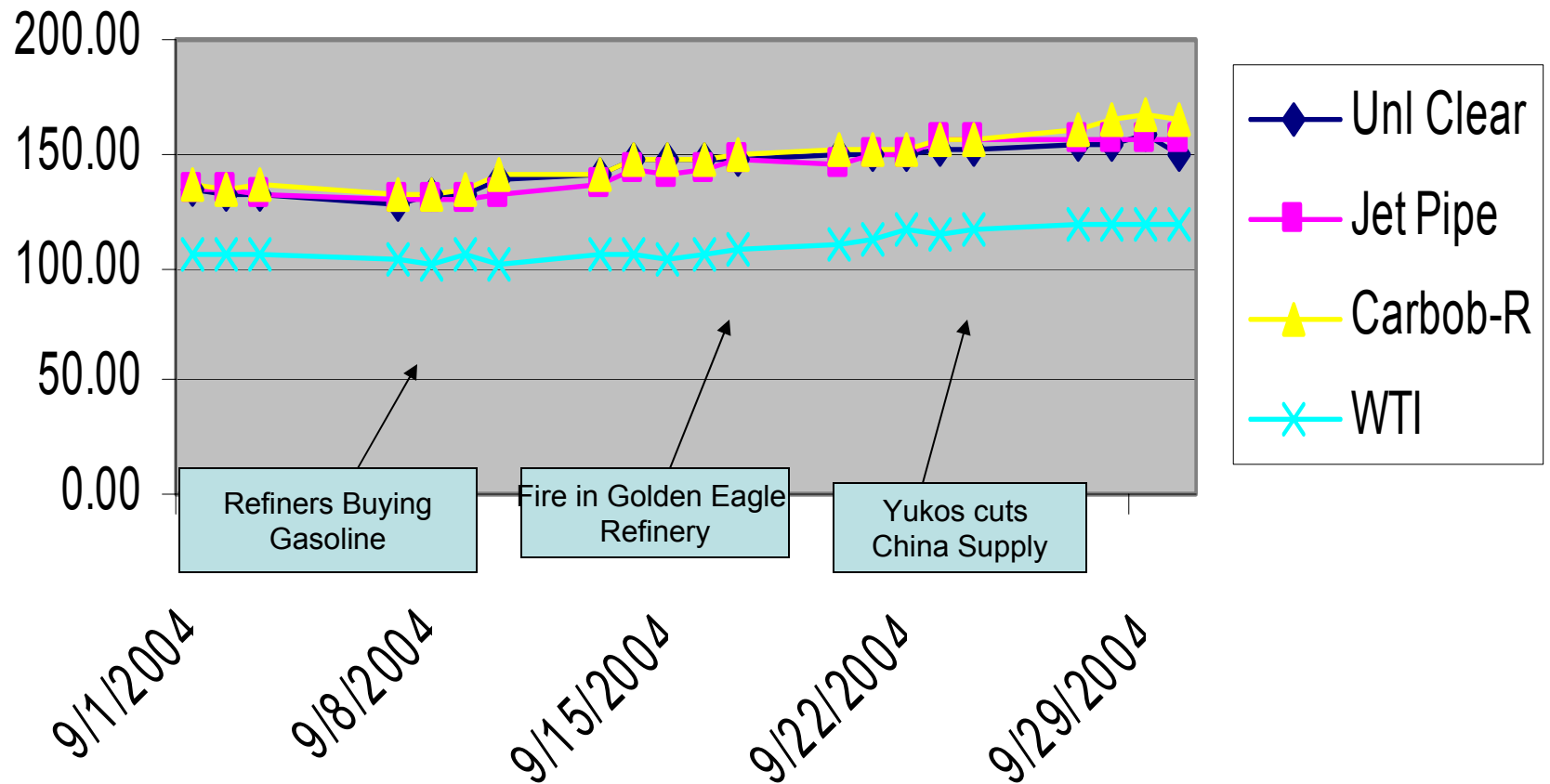
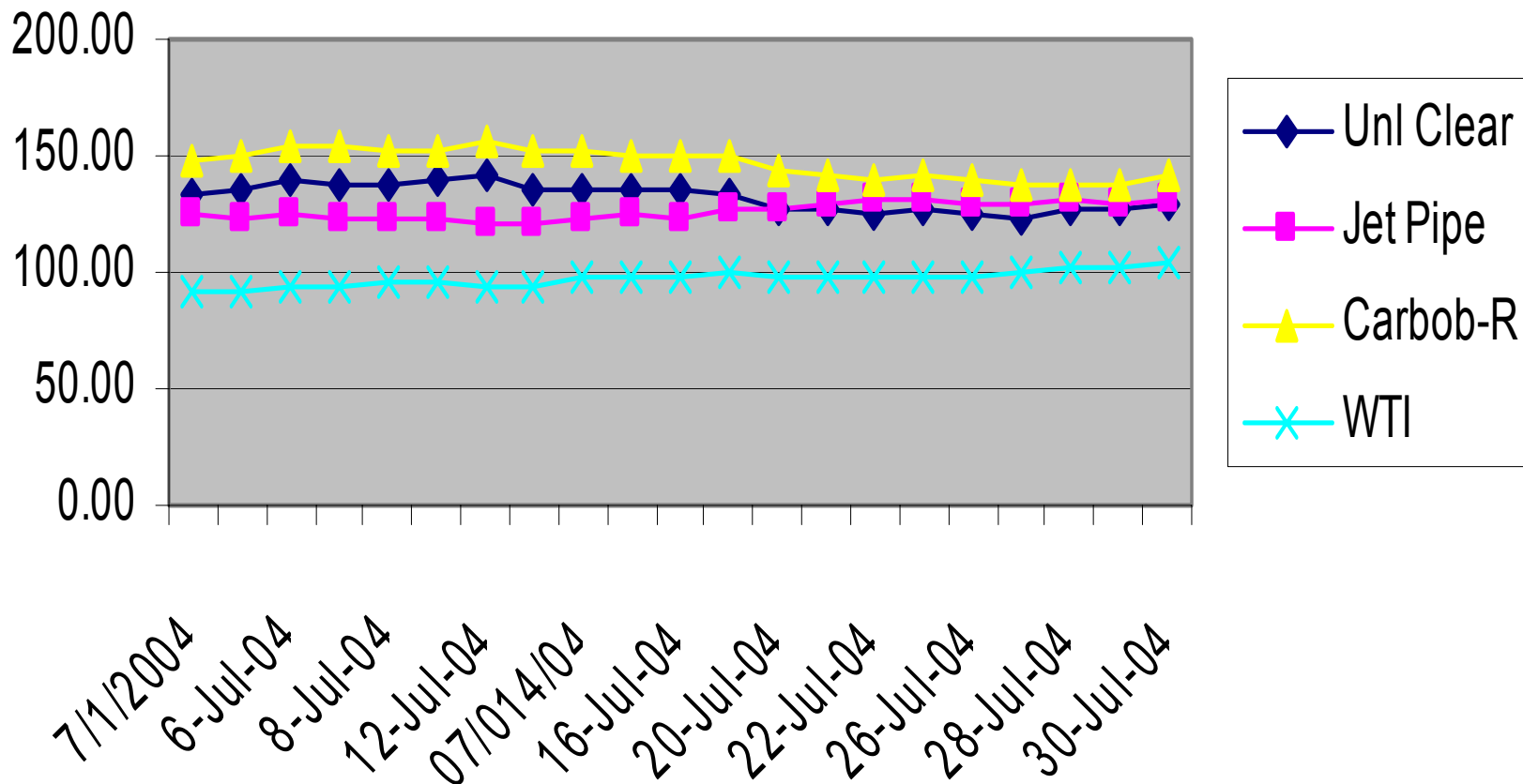


Chart July 2004



Spot to Street

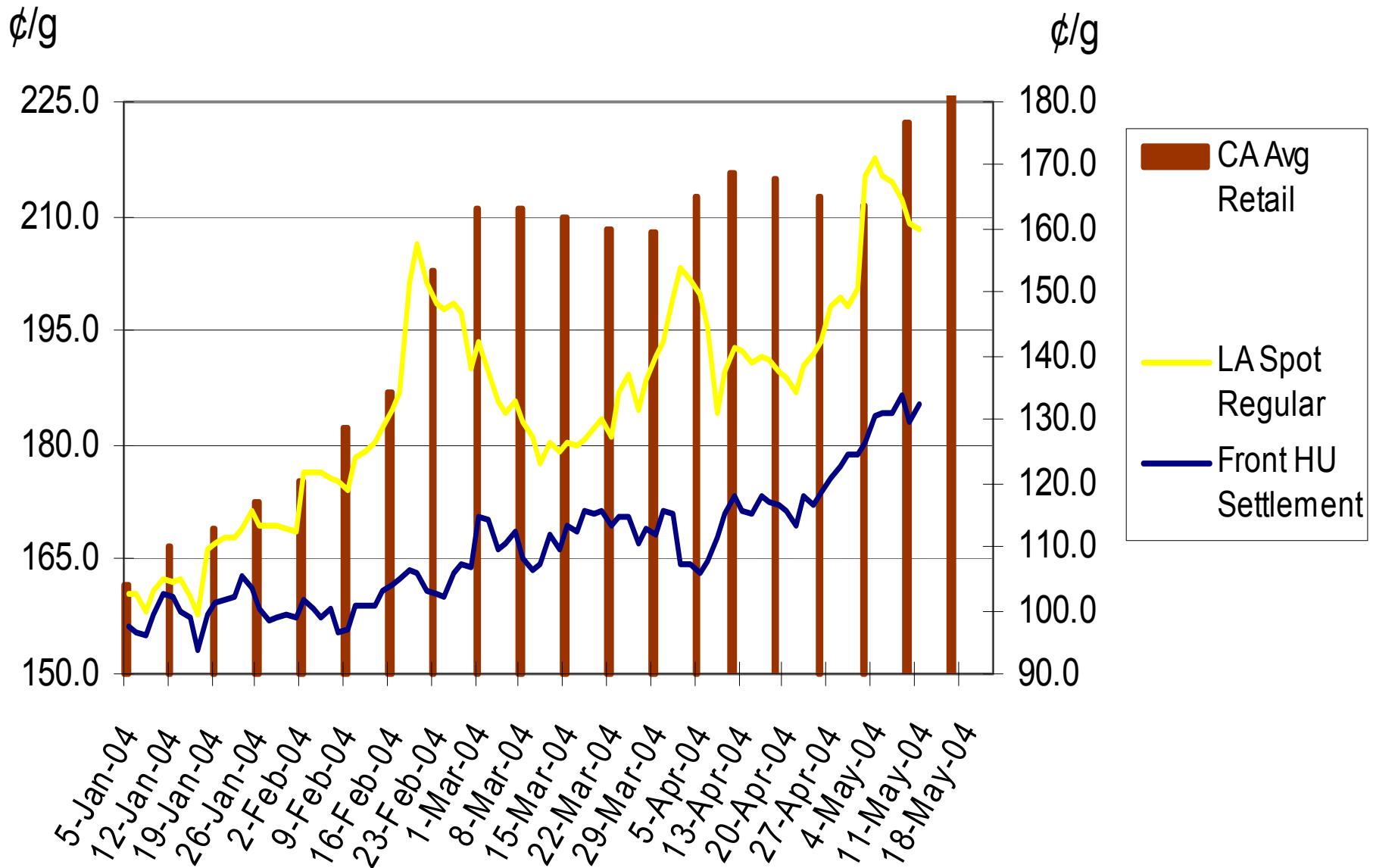
- Pass-through speed highest in U.S.
- But not on the downside
- Price stickiness costs billions to consumers
- Refiners win
- State Tax collectors win
- Consumers make economic choices

May 3, 2004 price spike

- West Coast CARB gasoline jumps to \$1.71/gal due to shortage in available prompt cycle gasoline
- The forward market for June delivery jumps to \$1.61/gal
- Gulf coast regular gasoline is \$1.30/gal
- Gulf coast alkylate is selling for gasoline plus \$.17/gal

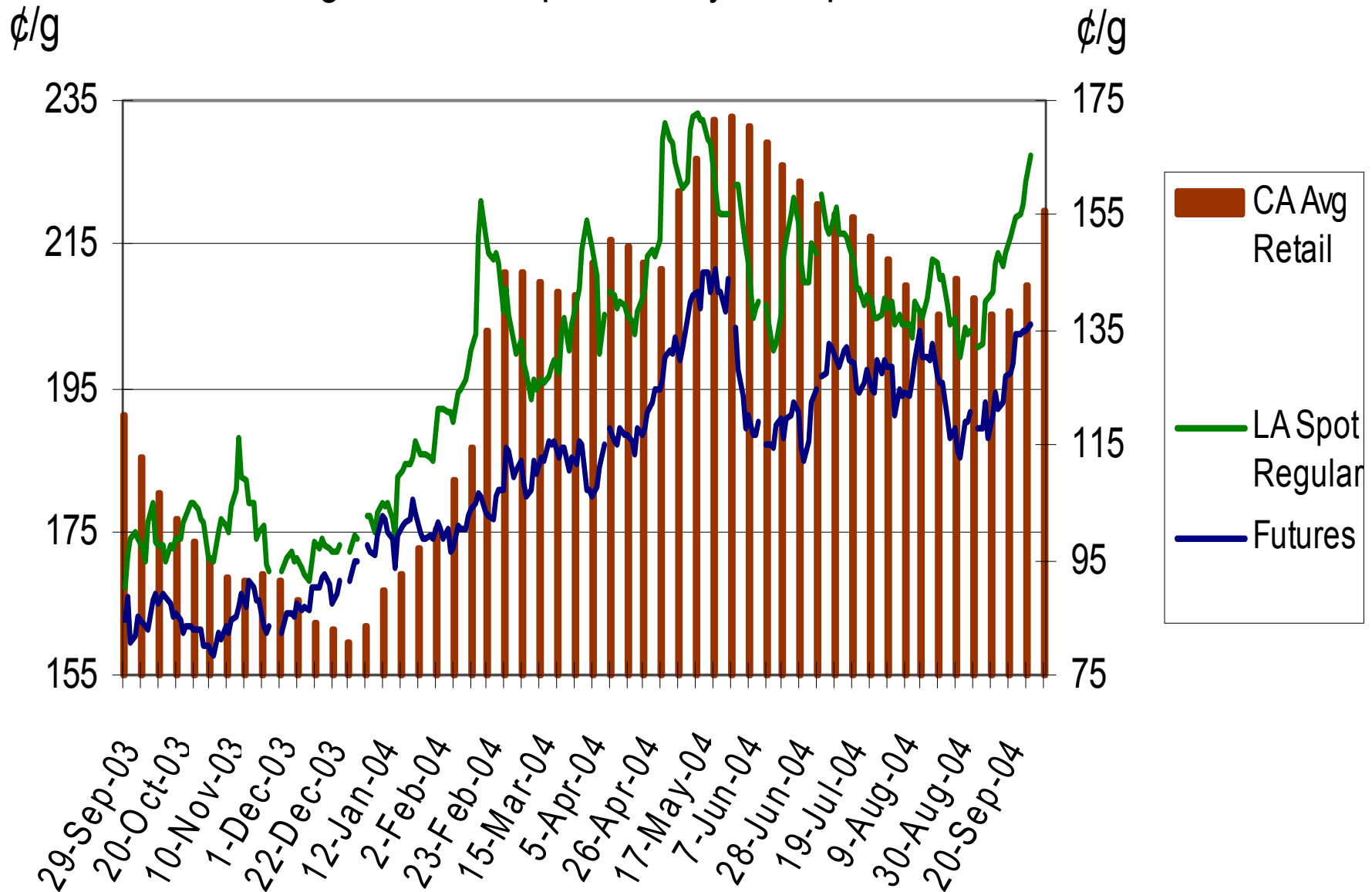
2004 Gasoline Prices

CA Avg Retail Regular, LA Spot Regular, and Nymex

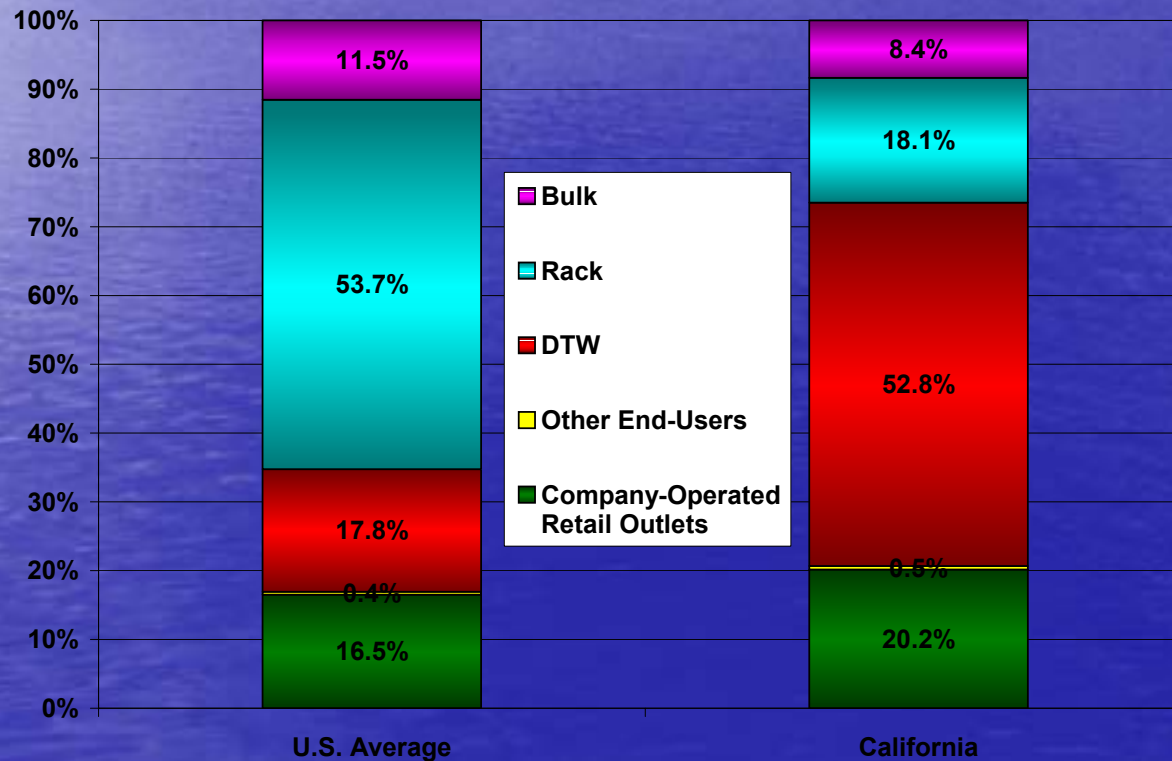


2003-04 Regular Gasoline Prices

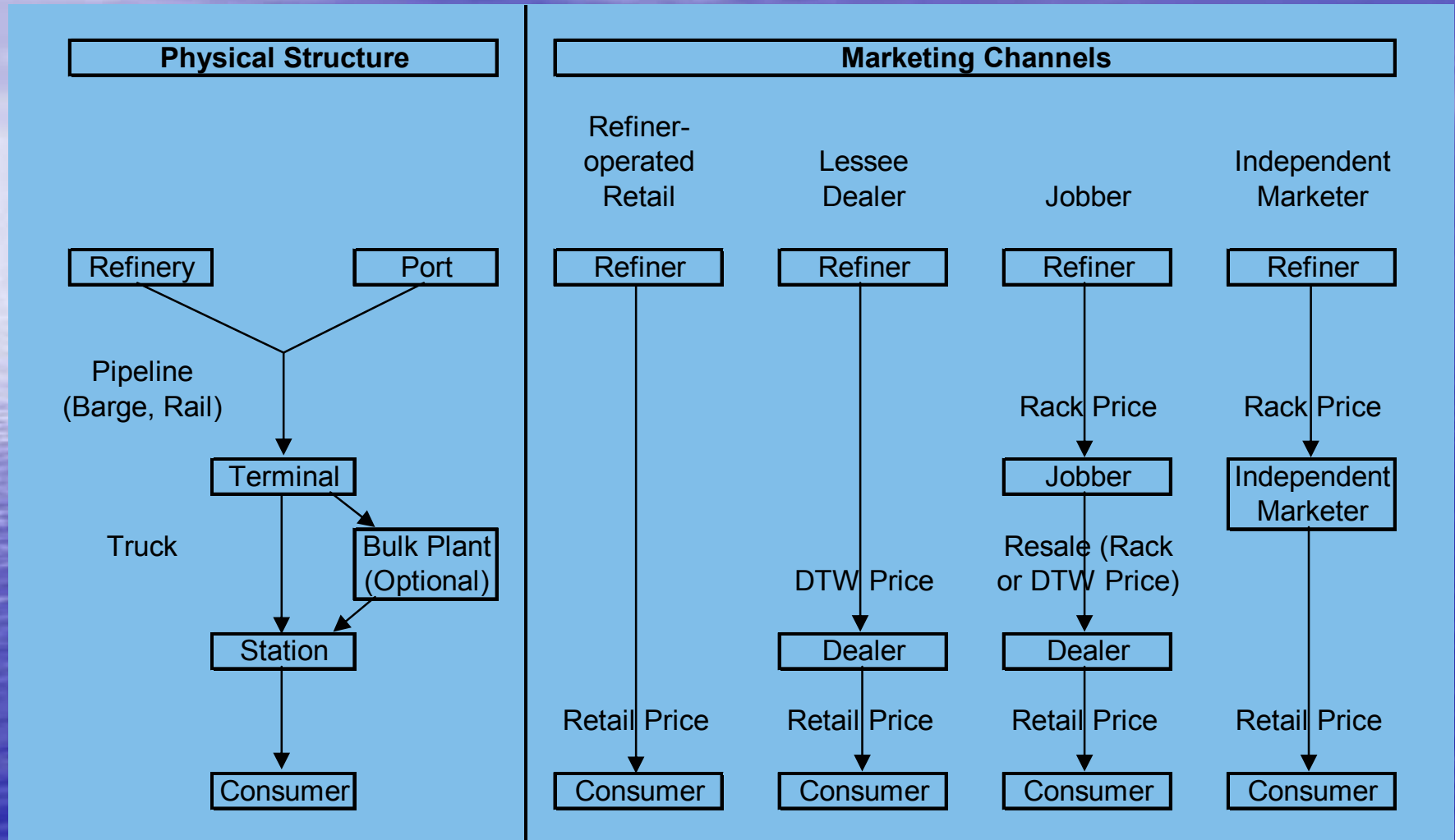
CA average retail, LA spot, and Nymex spot futures

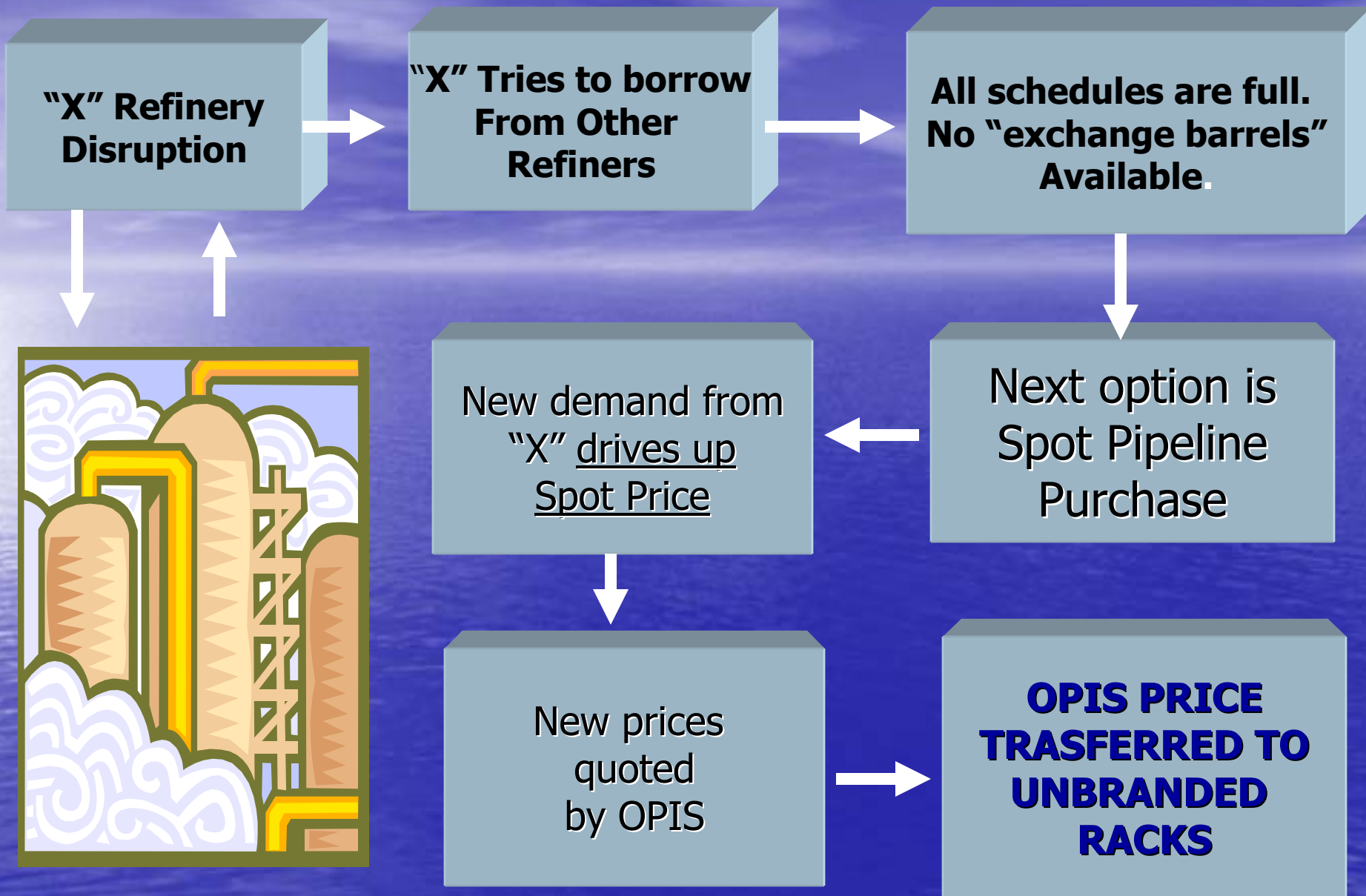


Integrated Oil Company Influence



Flow & Price Formation





**The word
spreads
quickly.**



***Independent Jobbers pass
New price to commercial
And retail accounts...***



**Independents raise
The street price.**

**Branded Retail
Moves up
In sympathy***

"X" Refiner
Searches
for
Import
Cargo
to
cover
supply
shortfall.

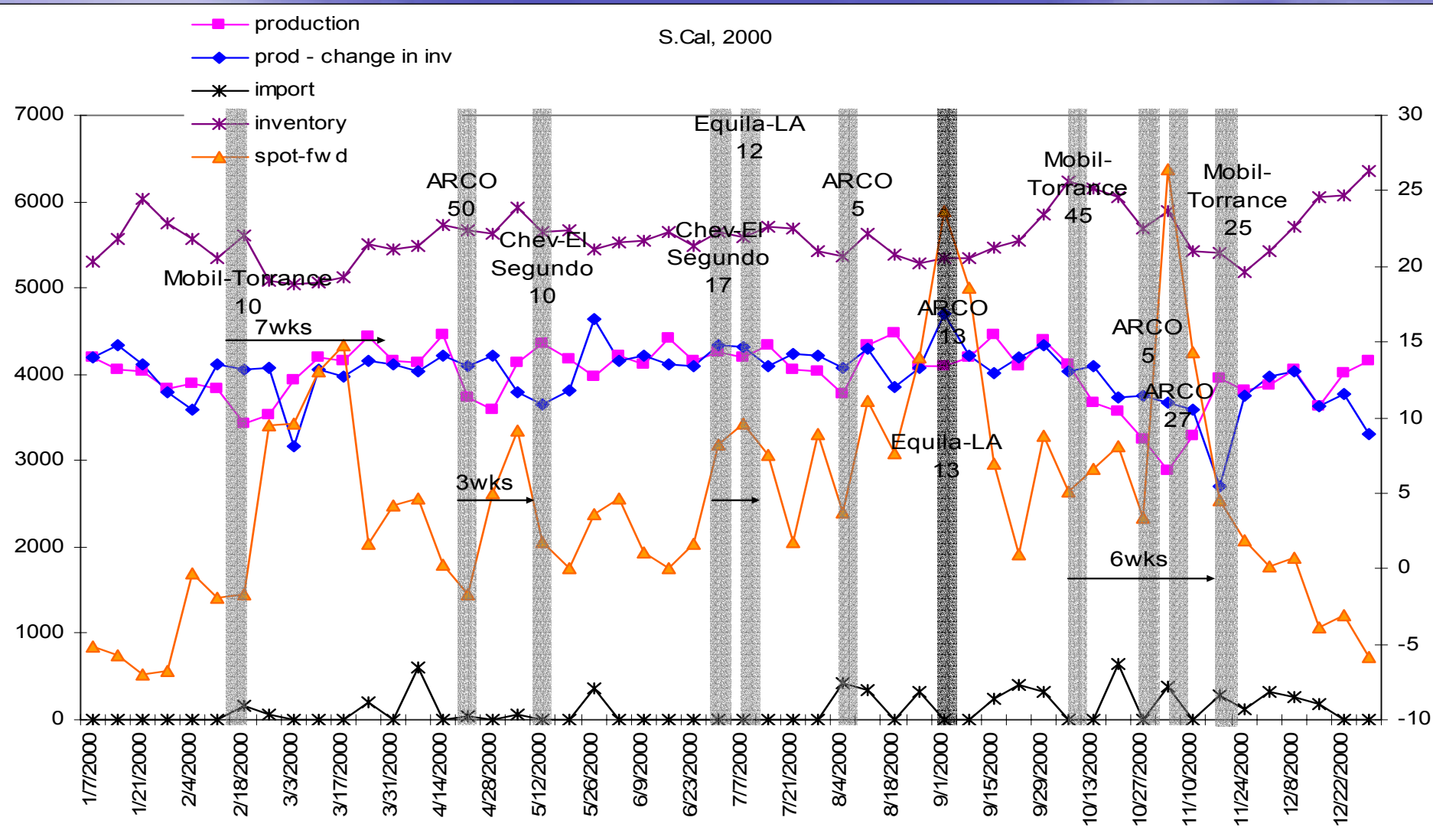
USGC plus freight
\$\$\$



Offshore
Supplies
tight.
shipping
expensive.
California price
in
Backwardation

Cargoes finally sail
On confirmation of
Sustained high price
In California.

Import Price Dynamics




Scheduling & Price Formation

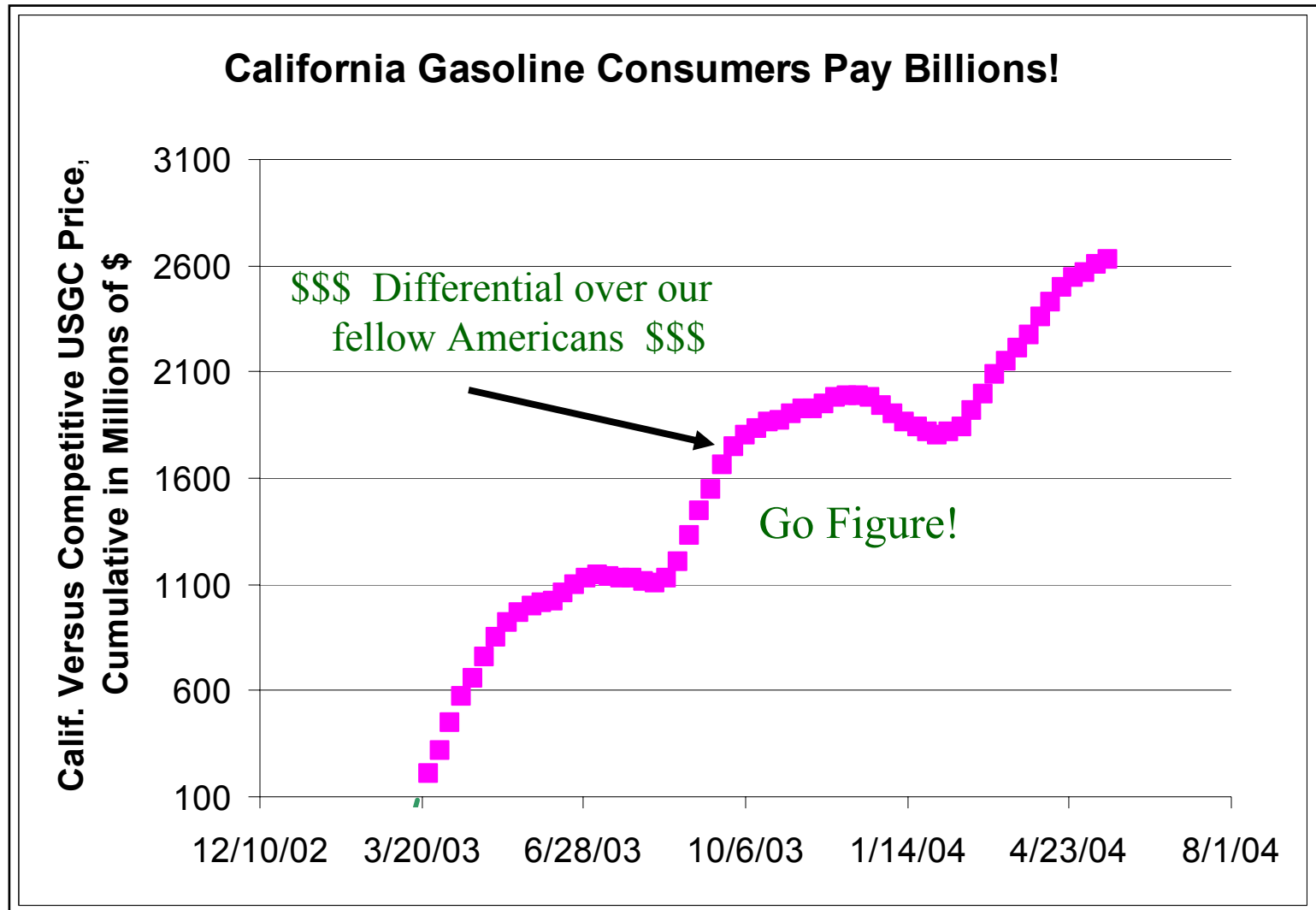
- Buyers option & the short squeeze
- The curse of the last barrel
- The independent sector leads the prices in up markets.
- Things get worse when supplies are tight
- Integrated Majors with downstream short positions may have disproportionate advantage.

Long Positions

Short Positions

Jul	Aug	Sep		Jul	Aug	Sep
15mb Co. Q	10mb Co. L	20mb Co. N		25mb Co. A	25mb Co. Q	50mb Co. N
75mb Co. R	25mb Co. R	25mb Co. R		20mb Co. L	20mb Co. N	10mb Co. Q
50mb Co. N	50mb Co. L	25mb Co. A		100m Co. N	50mb Co. L	75mb Co A
75mb Co. L	85mb Co Q	25mb Co. B		35mb Co L	40mb Co. Q	15mb Co. B
215	170	95		180	135	150
(35)	(35)	(55)		Short	Short	Short

Cost to Consumers



Market Power: Independent View*

- Study by UC Berkeley concludes:
 - a) Market Power is related to infrastructure access at wholesale level.
 - b) Market Power is related to higher prices in California.
 - c) Underlying causes are complex & political

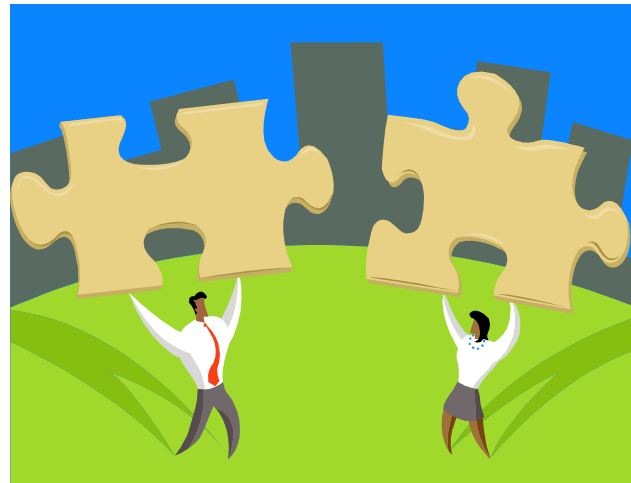
* UC Energy Institute: Dr. Severin Borenstein
May 2004

More Quotes from Economists

- "If refiners in the market are nearing their refinery capacity constraints and the marginal cost of producing more gasoline is high, then prices must rise significantly"
- To the extent that the inability to interconnect with the rest of the distribution system constitutes a barrier to entry, the ability of some firms with a strategic interest in preventing entry to do so is a potential concern going forward.."

Problems & Solutions

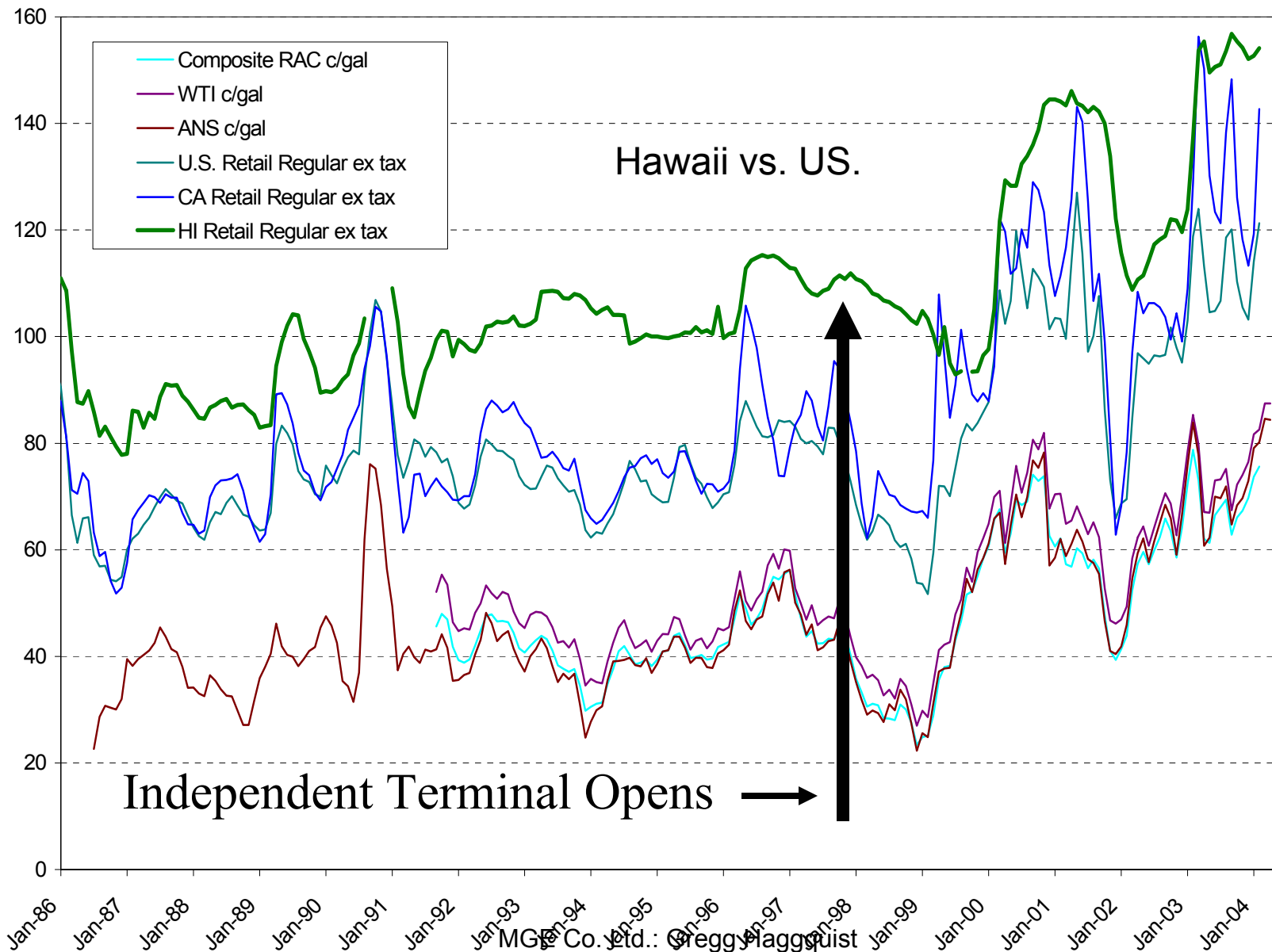
- Lessons from other markets
- Gate keeping & leveraging
- Access & Competition
- Government & Private Markets



What Can We Learn From Hawaii?

- Island economy like California
- Access through refiners only
- Independent terminal access enabled:
 - 1) Import parity pricing
 - 2) Hypermarket access to supply
 - 3) Lower wholesale prices

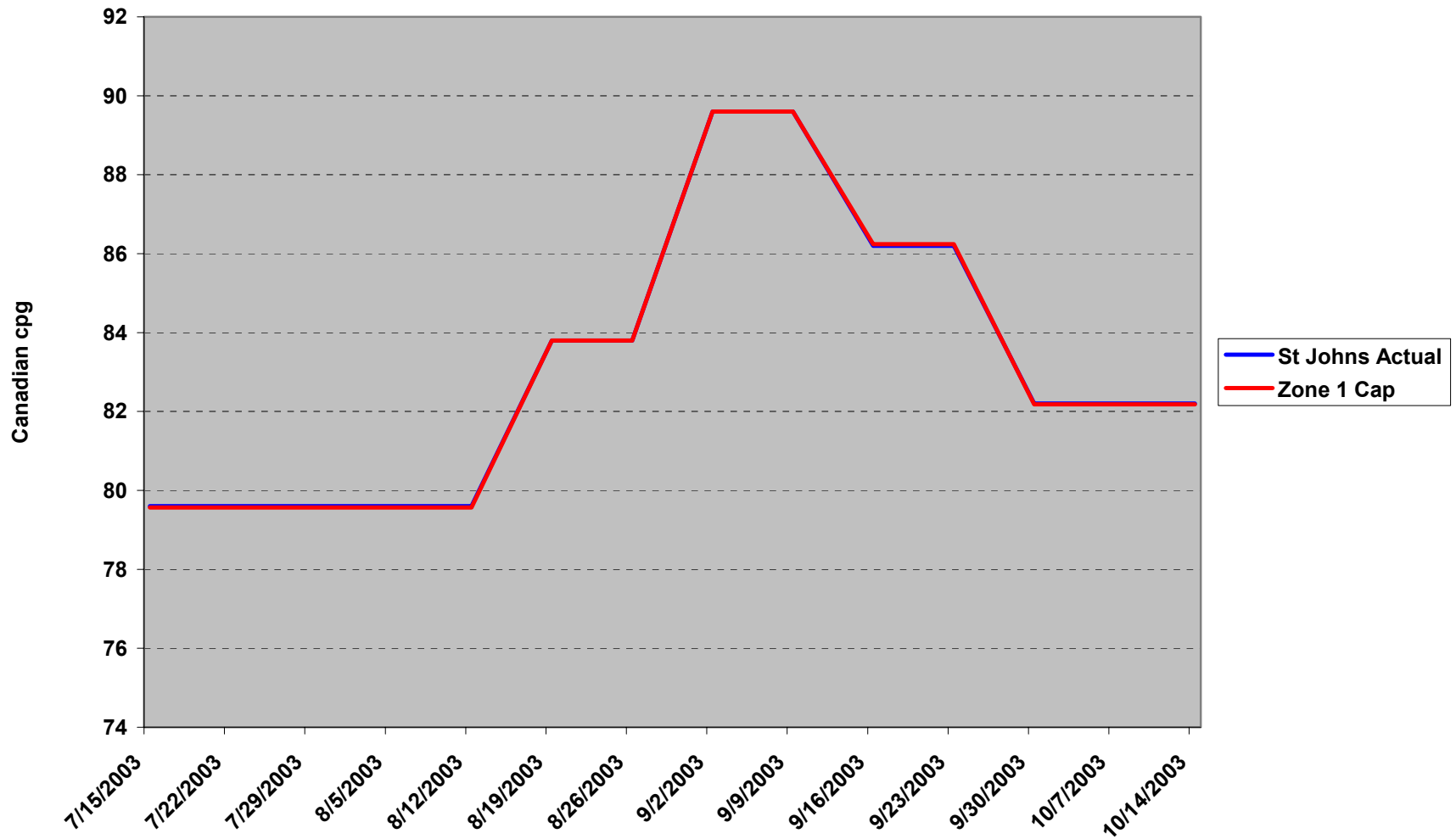
HAWAII VS. US GASOLINE - RETAIL



Price Caps = “Implied Permission”

- Studies of other price-capped markets shows that “caps” become “floors”
- California does not have price caps
- But does have **OPIS spot** prices.
- OPIS prices are “implied permission” to raise retail prices.
- **Small volumes can push up OPIS.**

St Johns NFL Caps vs Actual Three Early Moves in Mid-2003



What are the Choke Points?

- Without full import terminal access pipeline trade is restricted.
- Pipeline trade defines OPIS Spot
- OPIS spot defines unbranded rack
- Unbranded rack sets retail price throughout the State
- Spot price highly susceptible to manipulation.

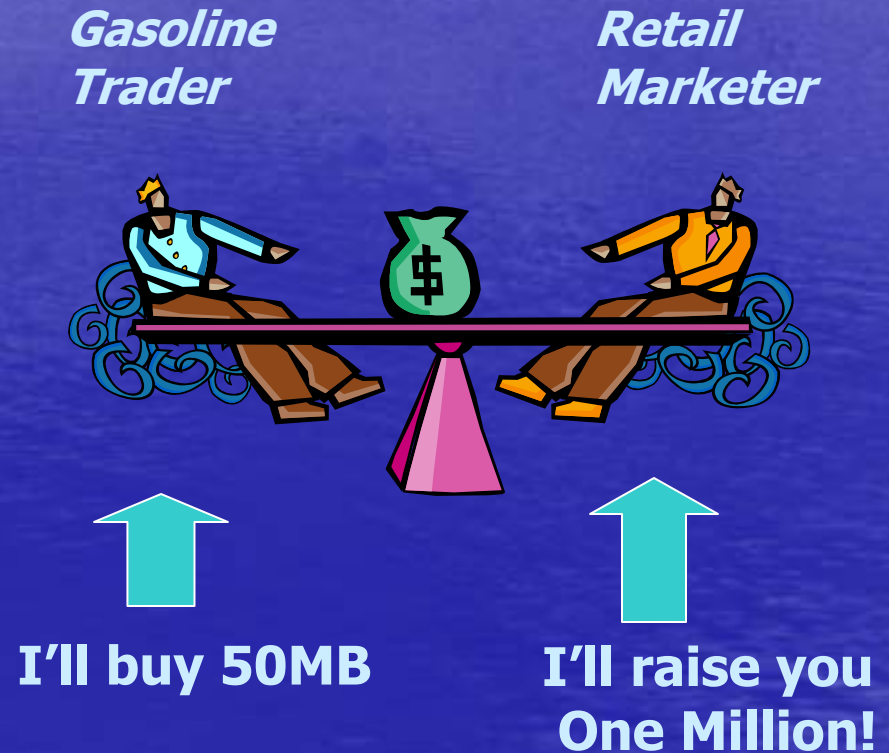
Is Watson a Choke Point?

- Yes: If access is restricted
- Yes: If Spot Market is driven by pipeline transactions
- Yes: If “leveraging” is systemically embedded
- Yes: If “sellers option” enables the short squeeze.



The Vigorish of Leveraging

- Using a nickel to make a million
- Purchase spot pipeline (25MB)
- Raise the street (1000MB)



Who's the Referee?

- John Q. Public?
- US Senators & Congressmen?
- AG's Office?
- Federal Trade Commission?
- Laissez Faire Philosophers?
- WSPA Apologists?



Price Spike Components Revisited

- Short covering on pipeline raises OPIS
- OPIS becomes unbranded rack price
- Rack price transferred to retail
- Wholesale “squeeze” subsides with delayed imports.
- Retail price lingers for billions of dollars.
 - - -Where's the ref???

If It's Broke, Then Fix It.

- Merged companies & the blinder effect
- Government's fragmented authorities
- NIMBY funding vs. the general good
- Price spikes as a plumbing problem
- CARBOB as a specialty chemical.



Summary

- Summary: Retail gasoline prices driven higher by spot shortages. “Stickiness” of retail price is costly to California consumers.
- Infrastructure projects are delayed for years. This must change.
- Unocal Patent needs to be revoked.
- Forward trends point to more problems during driving seasons.
- Trading rules in spot market may enable “gaming” similar to the Natural Gas crisis.

Solutions

- Promote the lowering of premium gasoline octane to 92 (R+M/2) from the current 93 (R+M/2)
- Abolish the Unocal patent
- Warn public and industry of potential supply problems
- Reduce the number of boutique gasolines sold in the U.S.
- Continue to promote improvements in the California import and storage infrastructure

Solutions (cont)

- Create Infrastructure review procedures at State level to counterbalance NIMBY resistance.
- Insure that all future specification changes by CARB are fully vetted for economic impact. (Cost of new specs includes “closing off the re-supply market”)

Solutions (cont)

- FERC “energy affiliate rules”, commonly referred to as “standards of conduct”, have been implemented on September 1, 2004 for natural gas and electricity traders
- Should CEC examine these regulations to see if they would be beneficial to California petroleum markets and infrastructure?